| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/648,600 | 08/25/2003 | Namit Jain | 50277-2235 | 4275 |

| 29989 | 7590 | 04/14/2006 |
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| EXAMINER |
|---|
| RADTKE, MARK A |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2165 | |

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>28 February 2006</u>.

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>25 August 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *12/5/03, 1/21/05, 5/5/05,*

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.      Claims 1 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. Specifically, the usage of the word "type" is unclear;

it is not well-known in the art how data types have unique memory addresses

associated with them. Examiner will assume that recitations of a "type" of data in the

claim are directed towards using equivalent data type representations in the native

language and within the database ("types of attributes" in Applicant's specification). For

example, a java.lang.string object will be saved as a string SQL construct.

### *Claim Rejections - 35 USC § 101*

3.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

4.      Claims 14-26 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. In the Application, page 33, paragraphs [0117]-

[0119] disclose that a computer-readable medium comprises "transmission media".

Program code contained on transmission media is intangible.

5.      Claims 1 and 12 are rejected under 35 U.S.C. 101 because the claimed invention

is directed to non-statutory subject matter. Specifically, the claimed invention does not

produce a concrete result. On lines 6 and 9, respectively, the limitation of "in response

to" a routine being called renders the claim non-statutory. If the routine is not invoked,

the method cannot continue to execute. Examiner recommends adding a step of

invoking the program.

### Double Patenting

6.      The nonstatutory double patenting rejection is based on a judicially created

doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent

and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d

1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645

(Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re

Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, In re Thorington, 418

F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be

used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly

owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a

terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with

37 CFR 3.73(b).

7.      Claims 1-26 of the instant application are provisionally rejected under the

judicially created doctrine of double patenting over claims 1-16 of copending Application

No. 10/648,577 (Jain et al., U.S. Publication No. US 2005/0050058 A1).

Claims 1-26 of the instant application are considered obvious over claims 1-16 of

Patent Application No. 10/648,577 (U.S. Publication No. US 2005/0050058 A1).

"A later patent claim is not patentably distinct from an earlier patent claim if the

later claim is obvious over, or anticipated by, the earlier claim. In re Longi, 759 F.2d at

896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting

because the claims at issue were obvious over claims in four prior art patents); In re

Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of

obviousness-type double patenting where a patent application claim to a genus is

anticipated by a patent claim to a species within that genus)." ELI LILLY AND

COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the

Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30,

2001).


### *Claim Rejections - 35 USC § 102*


8.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9.      Claims 1-26 are rejected under 35 U.S.C. 102(b) as being anticipated by <u>Skinner</u>

<u>et al.</u> (U.S. Patent 6,085,198).


        As to claim 1, <u>Skinner et al.</u> teaches a method of storing data into a database

(see Abstract), the method comprising:

        a client application receiving data (see figure 3, Comm Mgmt 305B and figure 4,

step 400 and column 16, lines 48-49);

        determining one or more routines that are associated with a type of said data,

wherein said one or more routines are implemented by a program that is external to

both said client application and a database server that manages said database (see

column 16, lines 49-55, where "routines" is read on "methods");

        in response to said one or more routines being invoked (see column 18, lines 6-

10), said program performing steps comprising:

determining one or more first values that are specified in said data, wherein said one or more first values correspond to one or more attributes of said type (see column 16, lines 60-62 and figure 4, step 404); and

determining one or more second values that correspond to one or more hidden columns of one or more tables in said database (See column 20, lines 24-27. The columns are hidden because the data members are private and thus invisible to the user/programmer.);

generating, based on said one or more first values and said one or more second values, a data stream that conforms to a format of data blocks of said database (see column 31, lines 1-2); and

writing said data into one or more data blocks in said database (see column 31, lines 23-33).


As to claim 2, Skinner et al. teaches further comprising:

in response to said one or more routines being invoked, said program performing steps comprising:

creating a data structure that comprises:

one or more first elements that correspond to said one or more attributes (see column 16, lines 60-62 and figure 4, step 404); and

one or more second elements that correspond to said one or more hidden columns (see column 20, lines 24-27);

populating said one or more first elements with said one or more first values (see column 30, lines 60-67); and

populating said one or more second elements with said one or more second values (See figure 5 and column 19, lines 30-32. It is implicit that these metadata are saved in the database.);

wherein said generating of said data stream is based on said data structure (see column 31, lines 1-2).


As to claim 3, Skinner et al. teaches wherein said data structure is created in memory that is associated with said client application (See column 7, lines 56-63. When Java loads and executes the program, any classes loaded by the application will be in the application's memory space. See also figure 9).


As to claim 4, Skinner et al. teaches wherein at least one of said one or more second values is associated with said one or more first values and distinguishes said one or more first values from other values in said data (see column 19, lines 30-60).


As to claim 5, Skinner et al. teaches wherein at least one of said one or more second values describes a position of said one or more first values relative to other values in said data (see column 20, lines 7-9, "myPassedMethods").

As to claim 6, <u>Skinner et al.</u> teaches wherein a number of attributes of said type is not defined to said client application (See column 17, line 65 – column 18, line 5. Attributes can be determined by calling functions instead of loading documents).

As to claim 7, <u>Skinner et al.</u> teaches wherein a type of an attribute of said type of said data is not defined to said client application (See column 17, line 65 – column 18, line 5. Attributes can be determined by calling functions instead of loading documents).

As to claim 8, <u>Skinner et al.</u> teaches wherein said generating and said writing are performed without causing a Structured Query Language (SQL) engine to load said data (see column 18, lines 8-12 where "without causing a SQL engine to load said data" is read on "extracted and loaded directly").

As to claim 9, <u>Skinner et al.</u> teaches wherein determining said one or more routines comprises locating addresses of one or more routines that are in a same entry as an identity of said type (see column 16, line 40, "associated data types").

As to claim 10, <u>Skinner et al.</u> teaches further comprising:

adding, to a table, an entry that indicates an association between said type and said one or more routines (see column 19, lines 66-67 and column 20 lines 15-19).

As to claim 11, <u>Skinner et al.</u> teaches further comprising:

invoking one or more routines that are located at one or more addresses that are

associated with said type (see column 18, lines 6-10).


As to claim 12, <u>Skinner et al.</u> teaches a method of storing data into a database

(see Abstract), the method comprising:

a client application receiving data that conforms to a first type definition that

indicates one or more first attributes, wherein at least one of said one or more first

attributes is of a type that is defined by a second type definition that indicates one or

more second attributes (see figure 3, Comm Mgmt 305B and figure 4, step 400 and

column 16, lines 48-49);

determining one or more first routines that are associated with said first type

definition, wherein said one or more first routines are external to both said client

application and a database server that manages said database (see column 16, lines

49-55, where "routines" is read on "methods");

in response to one or more calls to said one or more first routines:

creating a first data structure with one or more first elements that

correspond to said one or more first attributes (see column 16, lines 60-62 and figure 4,

step 404); and

populating said one or more first elements with one or more first values

that are specified in said data, wherein said one or more first values correspond to said

one or more first attributes (see column 30, lines 60-67);

in response to one or more calls to one or more second routines that are

associated with said second type definition:

creating a second data structure with one or more second elements that

correspond to said one or more second attributes (see column 20, lines 24-27); and

populating said one or more second elements with one or more second

values that are specified in said data, wherein said one or more second values

correspond to said one or more second attributes (See figure 5 and column 19, lines 30-

32. It is implicit that these metadata are saved in the database.);

generating, based on said first data structure and said second data structure, a

data stream that conforms to a format of data blocks of said database (see column 31,

lines 1-2); and

writing said data into one or more data blocks in said database (see column 31,

lines 23-33).


As to claim 13, Skinner et al. teaches further comprising:

generating a set identifier that is associated with one of said one or more first

elements (see column 20, lines 29-31); and

populating a plurality of elements in said second data structure with said set

identifier (see column 19, lines 30-32).


As to claims 14-26, Skinner et al. teaches a computer-readable medium carrying

one or more sequences of instructions which, when executed by one or more

processors, causes the one or more processors to perform the method recited in claims

1-13, respectively (see column 5, lines 50-57).

## *Additional References*

10.    The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

The following patents are cited to further show the state of art with respect to

object serialization to a database in general:

| Patent/Pub. No. | Issued to | Cited for teaching |
|---|---|---|
| US 20060036935 A1 | Warner; James W. et al. | Serialization of opaque types |
| US 20020147763 A1 | Lee, William W. et al. | JavaBean serialization (JavaBeans are opaque types) |
| US 20040015936 A1 | Susarla, Hanumantha Rao et al. | EJB loading |
| US 6470494 B1 | Chan; Victor S. et al. | EJB loading |
| US 20040117359 A1 | Snodgrass, Richard Thomas et al. | Direct Path Loading |
| US 7024425 B2 | Krishnaprasad; | Hidden columns |

| | Muralidhar et al. | |
|---|---|---|
| US 20030140308 A1 | Murthy, Ravi et al. | Hidden columns |

Examiner has also cited the JavaDoc for javax.sql.rowset.serial.SerialJavaObject, a well-known method for serializing Java objects into an SQL database.

### *Conclusion*

11.    Any inquiry concerning this communication or earlier communications should be directed to the examiner, Mark A. Radtke. The examiner's telephone number is (571) 272-7163, and the examiner can normally be reached between 9 AM and 5 PM, Monday through Friday.

If attempts to contact the examiner are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (800) 786-9199.
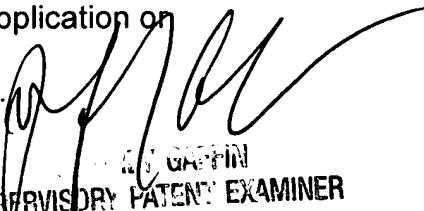
GAFFIN
SUPERVISORY PATENT EXAMINER
maxr                                            TECHNOLOGY CENTER 2100
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11 April 2006